California GARDEN

JANUARY–FEBRUARY 1979
Volume 70, Number 1
Seventy-five Cents

FLORAL EVENTS

February Meeting
Landscaping – Emphasis on Color – Mark Anderson
Tuesday February 20, 1979 Casa del Prado Majorca Room 7:30 p.m.
Door Prizes–Plants

Julia Clements
Floral is excited to present Julia Clements, internationally known arranger, for her first appearance in Southern California
January 29, 1979 – Atlantis Restaurant

Flower Arranging Classes

January 9, 16, 23 & February 6 — *1:00 p.m. Adrienne Green Room 101 Casa del Prado Balboa Park*
For reservations/information call Mrs. Hoyt 296-2757

February 27, March 6, 13 & 20 — *10:00 a.m. Martha Rosenberg Room 101 Casa del Prado Balboa Park*
For reservations/information call Mrs. Hoyt 296-2757

Tour

February 22 — *Trip to UCLA and the Guiberson Japanese Gardens. Guided tour of the Sculpture Court with luncheon at International House. Tour of the Gardens in the afternoon. Price $15 (including luncheon)*
Depart Balboa Park Organ Pavilion–8:00 a.m.
Depart La Jolla Library (Wall & Girard)–8:30 a.m.

SHOWS

January 27 & 28 — *San Diego Camellia Society "mini" Show*
Majorca Room Casa del Prado Balboa Park Free
Saturday 11:00 a.m. to 5:00 p.m.
Sunday 10:00 a.m. to 5:00 p.m.

February 4 — *Southern California Chapter, International Aroid Society*
Organizational Meeting
Quail Botanical Gardens Ecke Bldg. Encinitas, California 1:00 p.m.

February 10 & 11 — *San Diego Camellia Society's 32nd Annual Spring Show*
Federal Building Balboa Park Admission 75¢
Saturday 12:00 to 5:00 p.m.
Sunday 10:00 a.m. to 5:00 p.m.

February 24 — *Sogetsu School of Ikebana Plant Sale*
Sculpture Court Casa del Prado Saturday 10:00 a.m. to 3:00 p.m.

February 24 & 25 — *San Diego Orchid Society Spring "mini" Show*
Majorca Room Casa del Prado Balboa Park Free
Saturday 12:00 to 5:00 p.m.
Sunday 10:00 a.m. to 5:00 p.m.

California GARDEN

(USPS 084-020)

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SAN DIEGO FLORAL ASSOCIATION
and
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JANUARY — FEBRUARY 1979

VOLUME 70 NUMBER 1

COVER: *A drawing of Faucaria tigrina by Genevieve McAllister—member of San Diego Floral Association. She is an artist with talent in many fields.*

CONTENTS:

CALIFORNIA GARDEN (USPS 084-020) is a non-profit publication of the San Diego Floral Association, a non-profit horticultural organization. The magazine is published bi-monthly for $4.00 per year; $7.50 for two years, by San Diego Floral Association, Casa del Prado, Balboa Park, San Diego, California 92101. Manuscripts are invited. Manuscripts and illustrations submitted will be handled carefully, but we cannot assume responsibility for their safety. All opinions expressed are those of the author and do not necessarily reflect the views of the editors or the San Diego Floral Association. "Hortus Third" is the authority for all botanical names used in this magazine. Entered as second-class matter, December 8, 1910, at the Post Office of San Diego, California, under the Act of March 3, 1879.

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Under the sponsorship of
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Crocosmia 'Aurantiaca'

Old-Timer With New Name

by Bill Gunther

Crocosmia has been called by many names. Many folks call it *Montbretia*; some call it *Tritonia*; others call it *Watsonia*. It has bright orange or crimson blossoms, and it is a common springtime sight in old-fashioned California gardens. Kathleen Crawford's ink-drawing illustrates the strikingly attractive form of the plant far better than words can describe.

Actually, to be correct by current botanic terminology, this plant is a member of the genus *Crocosmia*, in the iris family. The recently published *Hortus Third* indicates that it is a hybrid of garden origin, *C. X crocosmiiflora*, derived from species which are native to South Africa, and that its cultivar name is 'Aurantiaca.'

By whatever name, it is a highly decorative and useful garden subject. It is exceedingly vigorous, and it survives neglect. It grows from a corm and it is a perennial, coming up year after year without need of replanting or replacement. The corms sprout soon after the rains commence, and from the time the first shoots appear until the blossoms fade the plant is continuously attractive. As soon as the blossoms do fade, one can go out and mow or chop or cut the entire plant back to ground level—bloomstalk, foliage,

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The drawing is from a collection of paintings donated to San Diego Floral Asso. by Kathleen Crawford. Mrs. Crawford's paintings have achieved national recognition.

RHODODENDRONS

For Warm Dry Climates

by Ted Van Veen

MANY HORTICULTURISTS CONSIDER the rhododendron the most beautiful and versatile flowering shrub in the plant kingdom. Its lavish display of showy blooms in a rainbow of colors is being seen more frequently in California landscapes.

The rhododendron's sumptuous flowers are only frosting on the cake. There is a form and size to grace almost any garden spot. Interesting plant structure and variety of foliage textures add other attractive dimensions. Rhododendrons are outstanding for innumerable landscape situations, but one displayed in a tub is even more striking. Container plantings are ideal for California's garden style and weather conditions.

The rhododendron is a genus of great botanical wealth, composed of approximately one thousand different species with flowers of many shapes and colors; in geographic origin from the arctic to the equator. Recognizing this bounty of heterogeneous plant material, breeders have been at work producing a parade of hybrids suitable for nearly every type of weather condition including that of the warm, dry areas of southern California. A diverse climatic heritage provides the hybrid with tolerance to a wide range of situations not usually inherent in a species form.

Included in the genus are about 75 evergreen and deciduous azalea species mostly native to East Asia and the United States. The fragrant, deciduous *Rhododendron occidentale*, growing in the wild from southern Oregon to Mexico, is the only azalea species native to the West Coast. Hybrid azaleas were little known and usually considered unsatisfactory in Southern California until recent years, due to lack of suitable varieties and proper cultural practices. An identical evolutionary conversion is taking place with "cousin" rhododendron, as proven varieties are found and successful growing techniques are refined.

For a number of years the Southern California Chapter of American Rhododendron Society has been evaluating rhododendron varieties for heat and salt tolerance. Some of the typical rhododendrons with large leaves and full flower heads that they have selected are:

'Anah Kruschke'	lavender, excellent foliage
'Anna Rose Whitney'	vigorous, dark pink
'Belle Heller'	good white with yellow throat
'Cheer'	medium-growing, pink w/dark blotch
'Jean Marie de Montagu'	bright red, medium grower
'Lord Roberts'	dark red with black throat
'Mrs. T. H. Lowinsky'	orchid-like white,gold blotch, tall
'Pink Pearl'	tall-growing, light pink
'Purple Splendour'	compact, dark purple
'Sappho'	vigorous, white with purple blotch

In addition to these traditional varieties there are unique rhododendron forms generally only Californians can enjoy. Some are deliciously fragrant:

'Emasculum'	low-growing, pink
'Forsterianum'	frilled white flowers
'Fragrantissimum'	very fragrant, white
'Jamesii'	small blue-pink flowers
'My Lady'	new variety, compact, white
'Snow Lady'	dwarf, white

Planting above ground, either in containers or raised beds is absolutely essential for most areas of Southern California. Most soils are too heavy for the

The rhododendron's sumptuous flowers are only frosting on the cake.

perfect drainage required by rhododendrons and azaleas. The recommended planting mix is 1/3 ground bark, 1/3 coarse peat, and 1/3 perlite. Unless a plant has been grown previously in a similar light mix, it is necessary to wash all soil from the root ball before planting. Do not plant too deep—the top of the root ball should be at soil level.

Select a planting site out of the wind. High filtered shade is ideal. Too much shade will restrict the formation of flower buds. Maintain reasonable moisture in the root area at all times. A light mulch of pine needles, coarse bark, or wood chips will conserve moisture and cool the root zone.

There is a tendency to over-fertilize rhododendrons. A very light application twice a year while the plants are young usually is adequate. Soil sulfur should be gently worked into the planting mix every six months. Meeting the cultural needs of this spectacular plant is not difficult.

Gardeners in warm dry climates will find this outstanding plant extremely rewarding because of its decorative qualities and springtime beauty. □

Mr. Van Veen is a nationally recognized propagator of hybrid rhododendrons.

Ed. Note: For further information about rhododendrons write to the American Rhododendron Society, Southern California Chapter, Box 8143, Long Beach, CA 90808.

DWARF FRUIT TREES

by George James

DWARF FRUIT TREES MAY BE GROWN in gardens where lack of space limits the planting of standard size trees. The use of dwarfs will increase the number of varieties that can be grown in the space available. They can be used as hedges or espaliers, and will be easier to manage than conventional size trees. Where root space is limited, they can be grown in containers.

Dwarf trees planted in garden soil require the same culture as standard trees of the same kind, but when planted in containers some special considerations are important.

• CONTAINERS

The best containers are those made of wood, clay, or cement. These materials are less likely to absorb heat which might damage roots. Drain holes are essential and there should be enough in the bottom of the container or in the sides just above the bottom so that excess water can escape quickly. The size of the container determines how long a dwarf can be grown before it becomes root bound. The smallest practical size for most dwarfs is one that is about 18 inches in both diameter and depth, or some other set of dimensions that will approximate this cubic capacity. Plants of all kinds when grown in containers tend to send their roots straight out to the sides. Do not waste root space by over potting. Plants should be moved into containers that are one size larger than the one in which they are growing so there is only an inch or so of new soil for the roots to grow into before they form a mass against the side of the container. They are ready to transplant to a larger container after a well formed root mass has been formed. This is best determined by slipping the ball out so the degree of development can be seen. Containers should be tapered from top to bottom so that, after inverting and tapping, the root ball can be slipped out easily without damage to the roots. Plants that have grown little during their growing season or do not respond to fertilization probably need transplanting to a larger container.

• ROOT PRUNING

When trees have become root bound in the largest container that it is practical to use, they may be given a modest root pruning. Remove the ball from the container; cut an inch of soil and roots from the bottom of the ball; also cut an inch from one side. Place fresh soil in the bottom of the container, return the ball and fill and tamp soil into the void. This procedure can be repeated each year, cutting the roots from a different side of the ball each time. The fifth year go back and start over again. Dwarf citrus will be disturbed least if this operation is performed in spring just before growth starts. Dwarf deciduous trees will suffer least if root pruning is done during winter while they are dormant.

• SOIL

The best soil mix to use in containers is one that drains rapidly. Such a soil will be made from components of different sizes so that large pore spaces are created. Some coarse organic material such as shavings can be used. This will eventually decay and release plant foods. There are some indications that redwood shavings release materials that are harmful to roots of deciduous trees while shavings of white woods do not. Other organic materials such as peat moss, leaf mold, or compost can be used to lighten potting soil and to add nutrients as they decay. Animal manures should not be used unless the soil mixture can be allowed to lay for a month or more so the manure is completely decayed; this would eliminate any possibility of root damage.

In addition to coarse organic materials, inorganic materials such as sponge rock, lava, or other rock particles can be used. These will not break down and will enable the soil to retain its ability to drain.

A potting soil made of some of these materials mixed with loam or sandy-loam soil will be more satisfactory for long term container use than will commercial potting mixes, which have little soil in

Above: Many kinds of pots are available at nurseries. Blind pots (ones without drainage holes) are difficult to plant and are usually used with another pot with drainage, placed inside.

Photo by Barbara Jones

them. Experience has shown that prepared potting soils do not sustain plants as well over a long period. A suggested formula for potting soil is: 1/3 good soil, 1/3 organic matter (some coarse and some fine), and 1/3 inorganic material (some coarse and some finer, such as sand). The ingredients should be well mixed together and moistened before being used. It is not safe, nor is it necessary, to add fertilizer to the potting soil.

• TRANSPLANTING

When preparing to transplant, cover drain holes in containers with pieces of broken pot, aluminum screen, or other material that will not decompose quickly but will prevent soil from plugging the holes. Place enough firmly packed soil in the bottom of the container so that when the plant is in place the top of its root ball is at least 2 inches below the rim. This leaves room for irrigation water. The soil that fills the sides should be added in layers and each layer tamped solid before the next one is added. The plant is then watered to finish settling the soil and to force out excess air.

• PLANTING

During January and February dwarf deciduous trees may be bought "bare root." Plant them so that the soil line (place on the trunk where the bark changes color) will be even with the surface of the soil when the planting is finished. The roots of bare root trees often originate at the bottom of the trunk and if these naturally point downward, a cone of soil should be made and the base of the trunk set on it. This will prevent a pocket of air being left at this point. Spread the roots in their natural position then place soil between and over the roots to hold them while the rest of the soil is added and firmed by tamping. These instructions apply also when planting in the garden.

Dwarf fruit trees already planted in good soil and growing in a suitable container are sometimes available. You might even be able to find one mature enough to bear fruit the first year.

• FERTILIZING

Dwarf fruit trees in containers, like other

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DWARF FRUIT TREES
(Cont. from Page 9)

plants that are grown where their roots are confined, should be fertilized if they are to grow and look well and bear fruit. Young or newly planted trees, especially small ones in large containers, need less fertilizer than do mature plants whose roots have become crowded. A commercial fertilizer, rather than manure, is most satisfactory, one that has the required nutrients, yet does not have an unpleasant odor or appearance. Slow release fertilizers release a little plant food each time water is applied, so the plant is continually being fed with no danger of root damage. Liquid fertilizers are safe, when used exactly as directed, because they spread evenly and quickly through the soil. If granular forms of ordinary commercial fertilizers are used they should be spread over the surface of moist soil and watered in as soon as applied. Do not use more fertilizer per application than indicated by the instructions on the package. It is safer to use less and increase the frequency of feeding should plants require more.

As a rule, plants will benefit most from fertilizers applied from spring through summer, but when plants in containers become large and the container is filled with roots, these plants may need feeding at frequent intervals all year around. Poor foliage color (leaves yellowish rather than green) and little or poor quality growth during normal growing season are indications of need for food. Plants that have been fed too frequently or too heavily will have dark green foliage and excessive growth, often weak and soft.

• WATERING

Plants in containers need to be watered frequently enough so the soil never becomes dust dry. Small plants in large containers must be watered with care so there is a chance for air to enter the soil as it dries. Large plants, in hot weather or hot locations, may need to be watered every day to prevent wilting and damage from drought. Since water consumption is so rapid, air still can enter the soil.

High organic matter soils, when they become very dry, shrink away from the side of the container. Water applied when this condition exists will run out before the soil becomes wet enough to swell. Every effort should be made to water often enough so this does not happen. If it does, the condition should be corrected as quickly as possible. A slowly dripping hose or frequent light waterings will apply water slowly enough for it to soak in. Small containers may be set in a larger container and allowed to soak. □

DWARF DECIDUOUS FRUIT TREES

by George James

SOME KINDS OF DECIDUOUS FRUIT TREES are available in dwarf form. There are dwarf apples, apricots, nectarines, peaches, pears, plums, and prunes. There is a dwarf cherry available, but it is not well enough suited to the climate of southern California to be considered worth growing here. There are no figs, persimmons, or nuts of any kind available in dwarfs at present. All of these dwarfs are created by budding a scion of the chosen variety into a root stock that will dwarf the growth of the resulting plant. The fruit is identical with that of the parent standard size trees. These dwarf trees are suitable for container culture or for use in the garden where the space is limited. These are called semi-dwarfs because their size, when grown in the ground, is from half to three-quarters that of the standard size parent. There are also genetic dwarf varieties of peaches and nectarines, varieties that are dwarf by nature, whose fruit can be different from that of the familiar varieties grown as semi-dwarf. These plants do not grow as large as the semi-dwarf, so are better for container culture. It is usual for genetic dwarfs to start bearing younger and some of them have more attractive flowers than semi-dwarfs.

Apricots are available as semi-dwarfs and there will soon be a genetic dwarf on the market. Nearly all varieties of apricots are self-fertile and one tree will

Flowering peaches have showy blossoms and either no fruit or worthless fruit. On Point Loma (between San Diego Bay and the Pacific Ocean) this double white is both a heavy bloomer and has copious fruit which has large seeds and is tart in flavor. Added to regular peaches this fruit enhances the flavor of jams, etc. If the fruit is allowed to lie on the ground, young trees will be produced by midsummer.

Photo by Barbara Jones

bear fruit.

Apples are dwarfed by budding to Malling roots, of which there are several in use. Malling 9 grows a tree that is about 40 percent the size of the standard parent variety. There are other Malling roots that produce trees that grow to be about three-quarters the size of the parent. These sizes occur when trees are planted in soil where there is unlimited root space. In containers the trees should be smaller.

Pears are dwarfed by being budded onto quince roots. Southern California winters are usually not cold enough for most varieties of pears to bear consistently. 'Bartlett' pear has the best quality fruit, but is not as reliable in this climate as are the 'Seckel' or 'Douglas.'

There are no genetic dwarf plums or prunes, only those dwarfed by being grafted to dwarfing roots. The plants best suited to the mild winters of southern California are plums from parents of Japanese origin, such as 'Santa Rosa' or 'Howard Miracle,' and the French variety of prune. Many varieties of plums need to be planted with another variety so their blossoms can be pollinated. Two trees, one of each variety, will be needed and the varieties must be those that will bear when planted together. The three varieties mentioned above will bear alone.

There are many kinds of peaches being grown that do not bear consistently where the winters are mild. 'Babock,' 'Desert Gold,' 'Gold Dust,' 'Robin,' 'Springtime,' 'Tejon,' and 'Ventura' will bear consistently in warm winter areas. When these are budded on a dwarfing root, a plant that is suitable for container culture in a warm winter area is produced. The genetic dwarf peaches are true dwarfs and because of their smaller size and slower rate of growth, will have a longer life as a container plant than will a semi-dwarf. There are ten dwarf peaches, most of which do better where the winters are colder than in southern California. The two best suited to this climate are 'Bonanza,' which has very attractive pink double flowers, and 'Southern Rose.'

Nectarines are available in both semi-dwarf and genetic dwarf size. Pollination is not a problem, but not all varieties do well where the winters are warm. The semi-dwarfs best suited for warm winter areas are 'Fantasia,' 'Independence,' 'Panamint,' and 'Silver Lode.' Genetic dwarf varieties best suited are 'Nectarina' and 'Southern Belle.'

• DISEASE CONTROL

Peaches, plums, prunes, and nectarines are subject to attacks by several kinds of fungus which can best be controlled by sprays applied only during the dormant season. Use a fungicide recommended for the control of peach leaf curl, brown rot, and shot hole fungus, and follow directions on the container. Make at least two, better if three, applications; first in December before all the leaves have dropped, the last in the spring as the buds start to swell, and the second between these two. If there is rain soon after

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Single flower of the double fuchsia 'Voodoo'. Picture taken in December—fuchsias have a long blooming season in So. Calif.

THE CARE OF FUCHSIAS

In Southern California

by *William H. Selby*

AS THE WEATHER WARMS with spring the growth of the fuchsia is at its best. With some, it is a sudden burst of growth from the semi-dormant period of winter; with others, it is more slow and secretive. Location, variety and type have much to do with this. Inland, with the warmer days, this change can be even more rapid. This is normal, as it is with other flowering plants.

With this warming trend, other changes will be noted. The most obvious will be the discoloration of some of the leaves. As fuchsias are very fast growing, leaves will begin to turn yellow, especially inside the plant. These along with the spent blossoms drop to the ground. This is a normal process. They have fulfilled their destiny and are replaced with new growth and leaves. However, if this leaf drop is ex-

THE CARE OF FUCHSIAS

(Cont. from Page 13)

treme there could be other reasons. Over watering and/or poor drainage could be the cause or the reverse, the plant has dried out to the wilting stage. With the latter, much of the foliage will not survive, but if watered in time new leaves will grow in a few weeks. Another possibility is an infestation of insects. Red spider mites, thrips, or even whitefly can cause bud and leaf drop. If this happens immediate action is required. Insecticides should be used for control, according to the manufacturer's directions. Caterpillars, such as inchworms (loopers), tomato hornworms, and other chewing insects often make their sudden appearance and are found only after they have done considerable damage, and in a very short period of time. Due to their color which is similar to stems and foliage, they are very hard to see. Many materials are on the market to combat these pests. It is not always practical to use them as you may end up eliminating more useful insects, such as bees and ladybugs, than you do harmful ones. An insecticide containing carbaryl is a good example; it does little to eliminate the chewing insects, but is sure death to the bees and hummingbirds. I have had good luck with a spray containing 23.4 percent dimethoate applied as a spray or as a drench. Used at half strength before the infestation occurs and at bi-weekly intervals, chewing insects will be eliminated or drastically reduced. Otherwise, it is recommended that poisonous materials be used only when and where conditions require them. Fortunately the common pests of southern California, slugs and snails, do not seem to care for fuchsias.

An often asked question is, does one prune or pinch fuchsias after they have started to bloom? Most emphatically yes, but each type and variety is treated differently. The rapid growth made since spring may have resulted in long branches reaching out indiscriminately, leaving the plant misshapen and out of balance. Cut these back as far as required to obtain the desired shape. Others should be pinched as required to keep the shape and to stimulate new growth and more blooms. It is a good idea to carry a pair of pruning shears when in the garden. In this way one can pinch and trim a little at a time.

I am a firm believer in a good balanced fertilizer, one that has the numbers 10-8-10, 20-20-20, etc., and containing trace elements. One should fertilize at one-quarter to one-half the manufacturer's recommendations, but often, every week to ten days. Plants like to eat the same as you do.

Two of the most important and most often neglected tasks are sanitation and cleanup, or whatever names you want to "hang" on them. As one pinches and prunes, waters, fertilizes, or just enjoys the plants, pots and containers should be cleaned. Pick out spent blossoms, fallen leaves, broken twigs, seed pods (berries), and other foreign matter that has collected, and discard in a trash container, never on the ground. These are ideal hiding places for mold and fungus and insects to live and propagate. It is also a good idea to carry a small stiff brush and whisk away the salt deposits and dirt that collect on the containers. All this is excellent advice, easy to relate, but when it comes to doing it in the lath house or in the garden or patio we all like to procrastinate, leaving it until later, when it may be too late. The damage will have been done.

There is no substitute for sanitation, but the job can be easier if one cleans while working. Washing pots, work benches, and even hands in a solution of part sodium hypochlorite (laundry bleach) to ten parts water, prior to making cuttings is extremely helpful in preventing dampoff and root-rot. An occasional spraying of any good fungicide will almost eliminate airborne fungi, algae, slime, and some mildew and rust.

Fuchsias are semi-tropical, shade-loving plants. They do not like hot dry weather, and only a few will tolerate any sun. The best potting mix is 10 percent perlite and 90 percent redwood compost. They require damp, but not wet conditions. Over watering is as bad if not worse than under watering. This applies to plants in the ground as well as to container grown plants. Clay pots and hanging baskets dry out much faster and require more watering—often every day—but only during the cool part of the day, never when the temperature is at its highest. A good rule-of-thumb is to insert a finger about an inch into the soil and if it comes out clean the container is in need of water (moist soil will adhere to the finger). Fuchsias like to have their leaves moistened. A fine mist does wonders in building up the high humidity that they like, and a second advantage is that it discourages most insects, such as red spider and mites.

A clean, well-fed, insect-free plant, trained to the desired configuration, will reward the grower with lush growth, and profuse long-lasting bloom. It is

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Right: Symmetry of form and subtlety of hue provide arresting plant sculpture for year round enjoyment indoors or out (for spiders, too).

CRASSULA FALCATA

by Jim Stalsonburg

CRASSULA FALCATA (krass-u-la fal-ca-ta) is probably the most handsome of all plants of this genus. It is often called the "Scarlet Paint Brush" because of its flower, but it is more popularly known as the "Propeller Plant" in reference to the shape and placement of the leaves.

Crassula derives its name from 'crassus,' Latin for thick, and falcata comes from 'falc' meaning scythe or sickle-shaped, which refers to the blue-gray, sickle-shaped leaves. Like the majority of succulent plants it is a native of South Africa where it ranges from Southeast Cape Province to Natal.

This plant is a "tremendous" greenhouse or window dweller, but in southern California where minimum winter temperatures stay near 45 degrees, outdoor plantings are recommended to add color and dignity to the garden.

Crassula propagates easily from stem or leaf cuttings. For best results, these should be taken in March. Prepare a stem cutting for crassula as you do with other succulents; make a clean flat cut at the bottom joint, remove a few lower leaves, and expose the cutting to the air for a few hours to allow a protective skin to form over the cut. Afterward, insert it into damp sand and do not water until the sand is completely dry. This process should take about a week. Then, add just enough water to keep the sand moist. Adding vitamin B to the original watering aids in establishing the roots more rapidly.

If conditions are right, roots will form in two or three weeks. When the roots begin to form, add a small quantity of liquid fertilizer to the water. As soon as the plant is well rooted, set it out in planting mix. The recommended soil mix is equal parts of sand and loam. Water it freely in the summer, but give it only enough water in winter to keep the leaves firm.

The crassula branches freely from the base to form large clumps having a sculptural quality. Its average height is about one foot. Pink flower stalks emerge from the tips of the branches in August and continue to flower through September. The nearly flat flower clusters are 4 to 6 inches across. With its blue-gray foliage and bright coral flowers flecked with gold anthers *Crassula falcata* is an exceedingly decorative plant. □

Photos by Bill Gunther

Below: Lush clusters of radiant, scarlet 5-petaled flowerets, made more lively by bright yellow stamens, remain brilliant for weeks.

GROWING CAMELLIAS

by *Les Baskerville*

CAMELLIAS ARE NATIVE to western Asia and for centuries have been recognized as hardy winter flowers. "Tea plants" shipped to England from the Far East in the early eighteen hundreds turned out to be camellias, so they were actually introduced to Europe by accident. They became popular in England and shortly afterward were introduced into the United States.

Selection of varieties is one of the most important factors in achieving satisfaction in the growing of fine camellia flowers. Not all kinds will do well in all locations. Sometimes a distance of five or six blocks will make a difference in the performance of a plant. Not all plants are this sensitive, but by-and-large certain varieties will do well along the coast, others will do well in the warmer area of East San Diego, and still others like to be farther inland. To find out which plants will do best in one's own area, consult a knowledgeable nurseryman or a member of a camellia society.

This brings us to a problem that frequently bothers the novice in camellia growing. The buds do not open, a condition known as "bullnosing." It is very frustrating to care for a plant for a year and then not be able to open the bloom. What causes this? The plant may not like its location to start with, or the cause may be a period of dry windy weather with low humidity. Blooms are 90 percent moisture, consequently they do not like dry weather, either hot or cold. In these conditions water daily and mist the plants morning and evening. Spray the ground around the containers during the day. Another reason for buds not opening may be that the plants did not receive proper care during the non-blooming period. Improper, or no, feeding or watering in spring and summer can cause blooming problems in fall and winter.

To obtain large flowers the plants should be disbudded so that they carry no more than one bud to a tip. This should be done as soon as the growth buds can be distinguished from the flower buds. Sasanquas and miniatures do not need to be disbudded.

Gibberellic acid is a stimulant that can cause strange and wonderful things to happen to a camellia flower. One can take a flower that would ordinarily bloom in April, treat the bud with gibberellic acid, and the flower will open in October. The blooming period of the plants can be extended by several months, and in some cases the acid will cause the blooms to be twice as large. The acid, or gib, as it is called, is available at most nurseries. It is very easy to apply. On the tip of a camellia branch is a growth bud and a flower bud. With your fingernail break out the growth bud. This will leave a small cup. In this cup, with an eyedropper, place one drop of gib. The flower bud will open in 45 to 60 days.

Camellias may be grown in many soil mixes,

completely. Naturally the frequency of watering will vary with the weather. During a dry hot spell this could mean every day. When watering always fill the container twice, this will leach out any excess salts in the root zone.

Feeding should start in February or March with the first sign of new growth, even though the plant may still be blooming. If the plant is dry, water it the day before feeding, and never feed a sick plant. Do not feed too heavily; it is better to have slow natural growth with good color. Cotton seed meal or organic fertilizers prepared for camellias are recommended. If the first feeding is March first, feed again on May first and July first. In the fall and winter a feeding of 0-10-10 fertilizer will help the size and quality of the blooms.

Left: Camellias are available in a wide range of colors as well as variegated in many forms. Blooming plants are available at nurseries at this time of the year. The camellia pictured has a variegated double flower. Photo by Barbara Jones.

Below: Camellia reticulata 'William Hertrich'. Photo by Howard Asper.

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however, a soil that is well drained and high in organic matter is most desirable. A combination that works well is one part sand, one part topsoil, one part redwood compost, and one part fine charcoal, vermiculite, or peat moss. A slightly acid soil is best.

Deep cultivation is extremely harmful to a camellia's shallow root system. Restrict cultivation to pulling weeds around the plants. A mulch of redwood compost an inch thick will be helpful for several reasons: it discourages the growth of weeds; it protects small feeder roots that are near the surface; and it will preserve moisture in the root area and may lengthen the watering interval from two to four days.

If one does not have good drainage in the garden, camellias will do better in plastic or redwood containers, since they like to be damp, but not standing in water. They should be watered as they are getting dry and should never be allowed to dry out

GROWING CAMELLIAS

(Cont. from Page 17)

Camellias are not bothered by many pests, but occasionally one may have aphids, scale, or loopers. To correct this condition spray with malathion. In the case of loopers, which usually appear in April through June, two or three sprayings may be necessary.

Camellias like shade or filtered sun and many growers use lath or saran cover for their gardens. White camellias may be grown in full shade while colored flowers usually require more light. Some varieties will not set buds or as many buds when grown in full shade.

Camellias can be pruned to make handsome shrubs when not in bloom. They are easy to graft. Some varieties set seed pods readily and can be pollinated by hand to make specific crosses and produce one's own new flowers.

The growing of camellias offers many challenges and opportunities, and can be a great hobby. □

CAMELLIAS RECOMMENDED
San Diego or Similar Climates

Red:	Pink:
'Kramer's Supreme'	'Tiffany'
'Premier'	'Debutante'
'Midnight'	'Demi Tasse'
'Lady in Red'	'Kickoff'
'Wm. Hertrich'	'China Doll'
'Guilio Nuccio'	'Mrs. D. W. Davis'
'Nuccio's Ruby'	'Elsie Jury'
'Yuletide'	'Buddha'
'Sunset Glory'	'In the Pink'
'Grand Prix'	'Pink Pagoda'
White:	**Variegated:**
'Nuccio's Gem'	'Gay Chieftain'
'Alba Plena'	'Dixie Knight Supreme'
'Coronation'	'Guilio Nuccio' Var.
'Silver Anniversary'	'Premier' Var.
'Pope John'	'Fire Chief' Var.
'Silver Waves'	'Miss Tulare' Var.
'Reg Ragland Supreme'	'Waltz Time' Var.
'Finlandia'	'Glen 40' Var.
	'E. G. Waterhouse' Var.
	'Adolphe Audusson' Var.

Mr. Baskerville is President of the San Diego Camellia Society— and has been growing fine camellias for many years.

Pluck not the wayside flower;
It is the traveler's dower.
—Wm. Allingham

Waxing Camellia Blooms

by *Mazie Jeanne George*

A LOVELY PORCELAIN-LIKE FINISH can be given to camellias and other flowers if treated by waxing in a process known to our grandmothers. It not only brings out the beauty of the flowers, but is fun too. Being able to lay cut blooms on a table without water for up to three or four weeks brings a certain satisfaction to the camellia grower. They make lovely flowers for patients in a hospital as they keep so well without water. Waxed camellias can not drop their petals or make you sneeze.

The quality of the waxed bloom is determined by the condition of the bloom and whether or not the flowers are bruised during the waxing process. They may turn brown around the edges if not handled properly, but this gives them an antiqued look. The singles, semi-doubles, and formals seem to take the wax nicely, but the very full double blooms seem to retain extra wax and have an artificial appearance. Blooms of good substance also take the process better than those with "soft" petals.

Cut the blooms with a 2-inch stem; be sure to leave at least one leaf, but not more than two. There should be no water, dirt, or nectar on the bloom. Refrigerate at least an hour before dipping.

A "large" double boiler is an absolute requirement. One can be contrived with a large pan inside a roaster pan of water. (Caution: wax is flammable.)

• EQUIPMENT AND MATERIALS NEEDED

1 double boiler (or contrived)
1 large dish pan (or pan of similar size) to hold ice water
1 candy or deep-fat thermometer
5 pounds of household paraffin wax
1 pint of mineral oil
1 bath towel and paper towels

Waxed pink camellia and leaves

Melt wax completely in double boiler—it will look like clear water. Turn off the heat and add mineral oil, stirring carefully and thoroughly. If oil is added before the wax is completely melted, the mixture will become cloudy. If this should happen, let the wax cool, then reheat and cloudiness will disappear. Remove the pot of wax from the heat and allow to cool to 138°.

Holding the flower face down by the stem, quickly and gently dip the flower into the melted wax with a sliding, sideways motion from right to left, covering the whole bloom with wax. Do not allow the bloom to touch the bottom or sides of the pot. Still holding the flower face down, and without turning it up to take a quick look, immediately submerge it in the ice water to cool as quickly as possible. Let it float for 20 to 30 minutes, pushing it down beneath the surface from time to time. Remove from water,

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WAXING CAMELLIA BLOOMS

(Cont. from Page 19)

and drain face down on paper towels placed over the bath towel for a cushion effect.

The leaves may be waxed or not, as they keep well naturally without water. The leaves are a little trickier to wax, but it is a challenge to try. Usually too much wax remains on the leaves, giving them an artificial look. If wax does get on the leaves, let it harden for a day, then it is easily removed by scraping lightly.

DO NOT empty the wax down the drain as it will stop it up for sure.

The wax may be used over and over; more wax and oil can be added in the same proportion. Always add the wax first, adding the oil after the wax has melted.

After waxing, the camellia will keep its form indefinitely, eventually turning brown beneath the wax. Some varieties rather soon, others last sometimes as much as two or three weeks. Petal blight shows up very shortly after waxing; the petals will have brown blotches which soon cover the entire bloom. As the waxed flower naturally ages with the browning, it may be "spritzed" lightly with gold paint from a spray can. Usually just one or two quick squirts, as the less you use the more natural the flower looks. Needless to say, while these blooms may be enjoyed at home they are not permitted in a standard flower show.

A new and interesting experience may await you; try waxing camellias. □

Mrs. George is a National Council of State Garden Clubs, Inc. instructor in artistic design, accredited judge, and former flower schools chairman for California Garden Clubs.

Photo by Barbara Jones

CONIFERS

by William L. Nelson

Part I

THE PAST DECADE HAS SEEN an increasingly high level of interest in plant life. Conifers seem to be receiving more than their share of this enthusiasm when the new publications and articles devoted to them are considered. Varieties of trees that were little known a few years ago can now be seen in such perfect color reproduction and crisp detail that you can almost feel the pitch on your fingers as the pages are turned. The verbal descriptions given are artistic—even poetic—a far cry from old Botany I. The public and nurserymen have responded by searching out promising new plants and in this series I will describe those that I am familiar with.

My observations apply only to the mild areas of Southern California below 2000 feet in elevation and corresponding to *Sunset's* Plant Climate Zones 19 through 24. The moderate temperatures here allow the growth of almost every known plant. Concealed behind that *"almost"* lies one of the greatest rubs in horticulture, and it must be included in any conifer discussion.

It is difficult to understand how climate can be too nice to allow some plants to even survive. The blackened and lifeless tomato plant we find after a sharp frost is disappointing but no great surprise.

The reverse situation though is mystifying. Little information is available to explain why a healthy Douglas Fir tree usually wastes away in a year or two after planting in our moderate climate. The cold hardiness charts that have been developed do not necessarily work in the reverse order. That is, the Eastern White Pine that prospers in Massachusetts (U.S.D.A. zone 5) is normally a total failure in our balmy zones 9 and 10 of Southern California.

Millions of trees (and dollars) have been

FOR WARM CLIMATES

Bristlecone Pine (Pinus aristata) from the White Mountains of California. At nearly 5000 years of age, a supreme example of adaptation.

Ed. Note: Dr. William L. Nelson is a specialist in propagation of conifers and native plants.

wasted because of incorrect selection and most gardeners have been victims at least once.

Lack of adaptability by a plant is caused by many known factors and probably some that aren't understood at present.

Those we know about include:

1. Temperature
2. Water quality
3. Photoperiod or hours of daylight
4. Soil pH (acid/base relationship)
5. Air pollution
6. Action of beneficial soil organisms (mycorrhizal type fungi)
7. Cultivation (proper drainage, planting technique and nutrients)
8. Humidity level

Without question the most crucial is temperature. Some conifers must have a certain number of chilling hours (below 40° F.) or they cannot grow in a normal manner. For them the millions of years of adaptation to their surroundings has built in life controls that are effective but extremely narrow.

With this in mind I suggest that the following conifers not be considered for our warm climates: spruce, *Picea*; fir, *Abies*; false fir, *Pseudotsuga menziesii*; hemlock, *Tsuga*; and larch, *Larix*. There is always the possibility that a chance seedling of these tree groups will have a genetic program allowing it to develop with fewer chilling hours. Yet to date there has not been a proven introduction. If you have a specimen of one of these groups that has grown well for more than three years please contact me so that the details can be recorded.

In a future issue I will be discussing one of the most fascinating of all tree groups—the Pines. □

CROCOSMIA 'AURANTIACA'

(Cont. from Page 5)

and all. With this plant (unlike daffodils or irises) there is no need to retain the faded foliage to build up strength for the next year's bloom. Even after being cut to ground level after blooming, the *Crocosmia*, in any favorable location, will send up just as tall and beautiful a bloomstalk next season as it did the last. Yes, this really is a vigorous plant!

An additional feature is the beauty and adaptability of its flowers in floral arrangements. One good look at Kathleen Crawford's drawing reveals the reason clearly. Most of the arranger's work is done in advance by nature; the multiple blossoms and bold-lined foliage already are coordinated in perfect artistic proportion. All the arranger needs is a low container with pin holder, one or two bloomstalks plus some bold, round-leafed foliage or a rounded piece of wood for basal balance and presto!–an attractive arrangement is all ready to steal sweepstakes awards from competing arrangements which have taken hours to assemble.

C. 'Aurantiaca' is easily propagated either from seeds or from corm offsets. Plant it in full sun along the coastal strip; plant it in partial shade inland. In colder areas cover the corms with a heavy mulch. It is not fussy about soil conditions and it does not require frequent fertilizing; it is almost immune to the common insect, fungus, and virus problems of local gardens; all it asks is a reasonable amount of watering. If you don't already have *Crocosmia* in your garden, go out and get it! □

DWARF DECIDUOUS FRUIT TREES

(Cont. from Page 11)

an application is made, the plants should be resprayed. Spray material should be kept off painted surfaces as some will react with certain paints and cause discoloration.

• MULCHING AND PRUNING

Plants in containers should not be cultivated as they develop roots just below the surface of the soil that could be damaged. To improve its appearance the soil can be mulched with decorative bark or stones of an appropriate size and color.

Dwarf fruit trees, as a general rule, need less pruning than do standard size trees. Dwarfs in containers need less pruning than those growing in the ground. Semi-dwarf plants of apricot, peach, plum, prune and nectarine are pruned during the dormant season by cutting out the shoots that bore the fruit the past season and leaving the new shoots that will produce the fruit the following year. Genetic peaches and nectarines need little or no pruning as they grow so slowly. Dwarf apples and pears need only to have any long shoots removed. These are usually cut off so several joints at the base of the shoot remain to produce flower buds in the future.

Most dwarf fruit trees are produced by budding the desired fruit into a suitable dwarfing root. At times, sprouts will develop from the root stock. If these are allowed to grow they will, in time, crowd the grafted part until it dies. The part that remains may not fruit, and if it does, the fruit can be of poor quality. Such sprouts usually have a foliage that differs from that of the named variety that comprised the top. There may be thorns on these sprouts. In all cases, the sprouts start below the bud union. The bud union is the point where the bud was inserted into the root stock. There will be a roughness in the bark or a difference in the size of the stalk where this was done. Such sprouts should be cut off as close as is possible to the point of origin, for more sprouts will start if the base of the shoot is left on the plant. □

THE CARE OF FUCHSIAS

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truly a thing of beauty requiring a minimum amount of TLC for a maximum reward.

Fuchsias are not only beautiful, they are fun.□

Mr. Selby grows and exhibits prize-winning fuchsias.

Photo by Barbara Jones

HOTHOUSE PROBLEMS

by *Charlie Fouquette*

I HAPPENED INTO A LOCAL orchid nursery one day when I was out wandering around. One of the gentlemen who was helping around the establishment stopped for a minute and we got to talking like we all do. "How's this goin'?", and "What's that cross of so and so's?", and "Oh yes, let me tell you about our new cross."; on and on...

Then my friend said, "I have a problem, the boss has a big beautiful hothouse that grows green growth like nobody's business, but when there are flowers, nothing but wilt, wilt, wilt." I asked this fellow just what he had checked. "I've been pretty busy, but I think I've checked everything," was his answer. So I asked him, "How about letting me take a look at it? I just might stumble on the problem." He said, "Be my guest."

I walked into the hothouse and sat down. I wanted to see what the mechanical functions of the house were, and the best way to do this is to sit down and watch what is around you and observe for a few minutes the wonderful things that occur in a hothouse.

I wanted to watch the house in operation: fans on, heater on, door closed, sprayer, misters, thermostats, etc. My observations were as follows: heater in operating condition, jets and burners clean, pilot on and adjusted, properly vented, and the vent clear. Fan—vertical air movement; good, good!; no mold; potting medium clean and moist, no sign of black mold; plants healthy; exterior exhaust fan sucking old air out of hothouse replacing it with new air. Inlet, inlet, where was the inlet? Oh ho, no inlet; well, folks, there's the problem.

The fan sucking the air out of the house was forming a vacumn, and as there was no other inlet through which air could be pulled in, it was sucking the air back down the heater vent. So instead of being expelled, the ethylene gases and unburned residue were being pulled back into the house and spread over the plants.

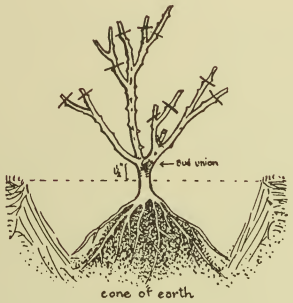
Answer: Change exterior fan to intake instead of exhaust, and place at the same end of the hothouse a louvered vent that actuates on positive pressure from the fan. After I told the man and the owner of my observations, they agreed that just might be the problem and they would look into it.

Now, I do not know if they ever took my advice, but the next time I saw some flowers from that hothouse, they were not wilted—in fact, they were outstanding. Yes, I guess for anyone, an ole country boy's common horse sense goes a l-o-ong, long way. □

Ed. note: Charlie Fouquette spends all his spare time after work in the orchid greenhouses of the nursery he owns in partnership.

How to Plant
Bare Root Roses

by *Rose Zellerflubber*



DIG A PLANTING HOLE 2 feet in diameter and about 1 foot deep. Put some of the soil into the hole in the shape of a cone and spread the roots over the cone so that they slope downward and are distributed evenly around the mound. Now adjust the plant so that the bud-union is 1½ inches above ground level. (Here is the principal difference between eastern and western planting techniques.)

With the bush at the proper level, pack soil firmly around and under the roots to eliminate air pockets. Fill the hole about three-quarters full of soil and firm gently, then fill the hole with water several times. After water has drained away, add the remaining soil. It is good practice to mound soil temporarily 5 to 6 inches above the bud-union, leaving it until the bush starts to sprout. Never allow any fresh manures or commercial fertilizers to touch the plant or its roots.

The diagram shows the proper places to make final pruning after planting. □

The Infinite has written its name on the heavens in shining stars, and on the earth in tender flowers–

Jean Paul Richter

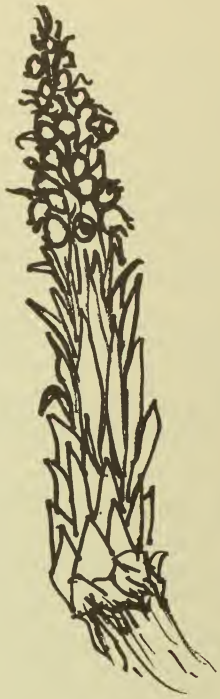
FIREBLIGHT IS A DISEASE which causes sudden death to shoots of pyracantha, apple, pear, loquat, toyon, and related plants. If not checked it can kill the entire plant in a very short time. It is caused by bacteria carried by insects from an infected plant to other plants. Infected shoots start to die at the top and the lower parts are killed as the organism moves downward. The leaves turn brown and dry on the plant, and if flowers or berries are present they change color, shrivel, and remain on the plant.

Control the disease by cutting off any shoots that show signs of infection, making the cut about a foot below the lowest brown leaves. If the shoot continues to die after being cut, it should be cut again, with the hope that spread of the disease can be halted. Dead parts should be disposed of in some manner that will prevent their serving as sources of infection for other plants. Since the tools used in cutting can carry bacteria from one cut to the next, they should be disinfected between cuts by dipping in a solution of one part household bleach to ten parts of water.

Fireblight disease is most active in the spring when succulent growth is present, therefore, it is wise to avoid heavy watering and feeding which promote excessive growth in susceptible plants. G.J.

THE CALIFORNIA SNOW PLANT

by *George W. Bremner*



"GOOD MORNING. Can you tell me where I may obtain information about a mountain plant that looks like a big bright red hyacinth without leaves, or maybe a red-blooming mushroom?"

"You must be asking about *Sarcodes sanguinea*."

Now how would you like to be able to come up with an answer like that without any hem-hawing? On many occasions I had received the answer snow plant but I didn't find a listing which fit the description under that common name. Jack Reveal at the Natural History Museum was the man who let the name slip glibly from his tongue without even a moment's hesitation. It seems he too had found it a fascinating plant while he was in the forest service. Dr. Reid Moran of the Museum also has noted the plant well into the mountains of Baja California and was able to point us in the right direction for a bit of knowledge.

The first sight of the *Sarcodes sanguinea* (hereafter called snow plant) is a mixture of pleasure and disbelief–perhaps a feeling of "Am I hallucinating?" There, probably near a rotting log, on a forest floor deep with pine needles, will be standing a bright red fleshy stalk, 6 to 15 inches high. No greenery, no bush, no twigs, no leaves–just a big flower stalk! After getting on your knees for a closer look, you see there really are leaves, but they too are red or pink. Not a tad of green pigment–no chlorophyll! How can they possibly grow? Is this a plant or have I found a type of fungus? But do fungi have flowers? Just what have I found? Careful pulling away of pine needles reveals a comparatively large stem–maybe 2 inches or so in diameter. A determined effort to find the source of this "thing" may require digging down as much as 2 feet or even more before finding the dense base of very brittle coralline, the book says, roots. By now you've decided either that this is a fascinating specimen or that it is some monstrous thing best left alone. Assuming the former, note more closely the large scales covering the stem. Really rather pretty as they spiral symmetrically from base to flower cluster. The individual flowers have five sepals and bell shaped corollas. Stamens are about the same length as the corolla. There are five compartments in the ovary.

Now tuck the needles back around the plant (yes, it is a plant) in reverse order of their removal and let's see what we can discover in literature about our find. A Mr. J. H. Elwes wrote from England in 1922 wanting more information about this strange plant he'd found in the San Bernardino mountains in 1888. There doesn't seem to be much more written now than there was then. We know that it is a saprophyte, not a parasite, growing in rich deep humus under coniferous trees at the 4,000–8,000 foot level from Southern Oregon into Baja California. No specimens are known to have been found in San

(Cont. on Page 26)

THE CALIFORNIA SNOW PLANT

(Cont. from Page 25)

Diego County. The name means "resembling flesh, red." Apparently they receive nourishment via symbiotic fungi in the root system as there is no chlorophyll. There are many seeds. It is a perennial herb which blooms in June and July.

The last two statements were from museum books and were rather startling to me. To the layman there is nothing about this creation that looks like an herb. I've never found it in the same place two years in a row. And I know I've seen it with snow surrounding it at Lake Arrowhead! And it just doesn't snow there in June and July. It doesn't depend on snow in order to bloom nor does it push up through the snow to merit the name "California Snow Plant," but late falling snows would cause it to appear that the plant does come with the snow.

As did the English farmer some 56 years ago, I'll close with some questions. Can snow plants be transplanted to like areas? Can they be grown from seed and if so why are there not more of them in groups? Reports of heavy groupings come from the northern California area, but in the San Bernardino mountains they seem to grow more often as individual specimens. How does the snow plant really get its nourishment? Fungi in the roots? Symbiosis of some kind with the conifer roots? Has anyone seen any snow plants in San Diego County? If so, where and when? If not, why the skip in territory?

Dr. George W. Bremner is an avid gardner, active member of the San Diego Floral Asso., and has often contributed to this magazine.

now is the time

—A cultural
CALENDAR OF CARE
from our affiliates—

compiled by PENNY BUNKER

BEGONIAS Margaret Lee

✓ to watch watering; slower growth requires less water, but do not allow to dry out.
✓ to protect from rains; place pots in a protected area as downpours can wash out soil and expose roots.
✓ to keep plants clean of old leaves and debris.
✓ to add more mix to pots as needed to keep roots covered.
✓ to make cuttings of cane type.
✓ to spray for mildew, control snails and slugs, check for other pests as mealybugs and loopers.

BONSAI Dr. Herbert Markowitz

✓ to reduce watering during the rainy season.
✓ to refrain from fertilizing your trees.
✓ to watch for aphids and other sucking insects; spray accordingly.
✓ to use a dormant spray such as copper oil or lime/sulphur mixture particularly on maples, quince, and other deciduous trees after they have been pruned.
✓ to prune fruit-bearing bonsai.
✓ to graft evergreen trees as well as conifers.
✓ to keep deciduous trees in shade if there is warm weather in February or they will start budding and sprouting.

BROMELIADS Thelma O'Reilly

✓ to check cups and between leaves for slugs.
✓ to protect new offsets against cold damage.
✓ to give added protection to soft, tender-leaved varieties.
✓ to expose the colorful-leaved plants to winter sun.
✓ to add frost hardy varieties to your collection.
✓ to practice good housekeeping, removing damaged leaves, debris, etc. from cups and pots.

CACTUS & SUCCULENTS Verna Pasek

✓ to protect from too much water—try to keep on the dry side in cool temperature areas.
✓ to hold up on any fertilizers; plants need rest at this time of year.
✓ to protect tender cacti and succulents from frost.
✓ to watch for insects—weather has been encouraging for pests.
✓ to use alcohol and water with cotton swabs for scale.
✓ to spray with malathion to control most pests.

CAMELLIAS Benjamin Berry

✓ to maintain a regular watering program to supplement any rains.
✓ to remember camellias like moist soils, but not wet.
✓ to continue to spray for looper worms, and dust with chlordane for leaf beetles.
✓ to renew mulch where needed; use fir bark or pine needles.
✓ to feed 0-10-10 fertilizer; do not fertilize newly transplanted bushes, but water well and often with a vitamin B-1 solution.
✓ to plant and transplant while in bud or bloom before new growth starts.
✓ to remove poor and old blossoms to prevent any fungus build-up.
✓ to use a fungicide if needed.

DAHLIAS Abe Janzen

✓ to dig clumps as tops have completely dried. Cut tops just above the ground. Store without dividing in vermiculite or sand, leaving the soil on that adheres to them. Keep in cool area.
✓ to inspect those tubers stored earlier for any signs of shriveling; if too dry, add a little moisture.
✓ to start in February to prepare your garden spot. Turn soil, add humus, and fumigate. Dig in humus, equal parts of superphosphate and sulphate of potash—turn well.
✓ to start some selected roots in February to sprout that may make good cuttings. Can apply bottom heat to encourage sprouting.

(Cont. on Page 28)

(Cont. from Page 27)

EPIPHYLLUMS Mary & Warren Kelly

✓ to check for pests—slugs and snails especially.
✓ to protect from too much rain if necessary. Do not overwater, but do not allow to dry out.
✓ to protect from frost.
✓ to protect new growth and long stems from any wind damage.
✓ to start feeding in late January or February with low nitrogen fertilizer (2-10-10) to prepare for the blooming season.
✓ to tie stems if grown on trellises; protect from breaking.

FERNS Ray Sodomka

✓ to water gently, but do not soak on warm days; too much water gives ferns cold feet on cool nights. Check hidden or covered plants to see that they get water—rains may not reach them.
✓ to spray for aphids.
✓ to keep after slugs, snails, pill-bugs, etc.; winter does not stop them.
✓ to fertilize platyceriums (staghorns)—give bone meal, hoof and horn, or a high nitrogen liquid.
✓ to take off "pups" from platyceriums and mount.
✓ to replant spore.
✓ to trim off dead fronds and keep surrounding areas clean—use dead material for compost.

FUCHSIAS William Selby

✓ to start some pruning in frost free areas. Remove all weak, thin branches. Cut all good healthy growth back at least one-third or leave two or three eyes (nodes). Baskets should be cut back to edge of basket and trimmed to within four inches of soil on top.
✓ to shape plants in ground according to variety.
✓ to take cuttings from good end clippings; takes a little longer to root in cool weather.
✓ to spray remaining foliage and ground to eliminate pests that might winter over.
✓ to apply a good 10-5-5 fish-type fertilizer after pruning.
✓ to pinch those plants pruned in the fall.

GERANIUMS Carol Roller

✓ to water less often, but thoroughly.
✓ to continue feeding a balanced fertilizer in liquid form every fourth or fifth feeding.
✓ to prune any plants which have not been cut back. Leave some green leaves on each stem. Leggy plants which have been cut back once can be cut back again to produce a more compact plant.
✓ to tip pinch young plants and larger plants which were pruned earlier.
✓ to make cuttings from the prunings and shelter them from extreme weather.
✓ to continue pest and disease control using all products according to the manufacturer's directions.
✓ to give temporary shelter from freezing if temperatures go below 28°.

HERMEROCALLIS (Daylilies) Sanford Roberts

✓ to water only if soil is dry.
✓ to prepare planting areas for next spring's plants. Spade deeply and incorporate peat moss and organic compost (natural or nitrogen-fortified redwood) into the soil. Mix thoroughly.
✓ to remove dead bloomstalks and foliage from base of clumps to combat aphids that might winter over and invade new spring growth.
✓ to plant seeds in a good potting mix after they have been refrigerated for 45 days or more to induce dormancy.
✓ to wait until February or a little later to divide when planting begins in this area.

IRIS Bertha Bloombug

✓ to continue watering your bearded iris if rains are light.
✓ to start a regular spray program with copper oil spray to help control rust.
✓ to make last plantings of the bulbous iris for spring bloom.
✓ to start in February to feed all iris with a 0-10-10 liquid fertilizer—follow directions carefully and do not overfertilize.
✓ to control slugs and snails.
✓ to keep old brown fans off tall-bearded; good ground cleaning and spraying is helpful in pest control.

ORCHIDS Charles Fouquette

✓ to check moisture in pots of phals and catts; do not be fooled by gray days.

✓ to give dendrobium nobile hybrids cool nights to encourage bud growth.

✓ to stake up flower spikes on cymbidiums and place light-flowered plants, in bud and flower, in shade to prevent fading.

✓ to be aware of sudden temperature drops for those in the outlying areas.

✓ to check burners and valves on heaters for leaks, and check wires to transformers, regulators and thermostats.

✓ to check the vent pipe on the heater—see that it is not clogged.

✓ to remove water from the swamp cooler, check the pump and remove any lime deposits, oil the motor, check fan belt.

✓ to remember phals should be spiking; if you move the plant place it in the same general direction so the flower will bloom in a uniform manner.

✓ to water the many orchid plants that have no pseudobulbs to store water. Water and fertilize early in the day so plants retain no water in the crown by nightfall.

✓ to dry out the American types of orchids—laelia, oncidium, epidendrum, etc. (You should consider from what area, south of the border, the plants came.)

ROSES San Diego Rose Society

✓ to prune roses—watch for dates of the demonstration on pruning in Balboa Park, San Diego.

✓ to spray after pruning to control pests, rust, fungus—use a dormant spray.

✓ to cultivate the established beds; feed as new growth starts—one cupful per bush.

✓ to give newly planted bushes liquid fertilizer six weeks after planting.

✓ to plant bare-root roses, mounding each bush with damp mulch or earth until new growth starts, to prevent dehydration.

✓ to start preventative spraying in February for mildew and aphids—use ½ strength on new foliage.

✓ to establish a schedule for watering and spraying.

VEGETABLES George James

✓ to start indoors, in flats or pots, seeds of tomatoes, peppers, squash, and cucumbers which will be grown on in pots to be planted in the garden about the middle of March.

✓ to plant roots of perennial vegetables and berry plants in the garden as rain and cold weather are not likely to harm them.

✓ to plant onion sets and make a second planting of lettuce and vegetables of the cabbage family and celery, using started plants.

GREEN THUMB Olga Snailslee

✓ to make marguerite cuttings from new tips. Remove lower leaves and insert cutting in rooting medium. Keep in shaded place until rooted.

✓ to start plantings of gladiolus bulbs, and make successive plantings at monthly intervals for flowers over a longer period of time.

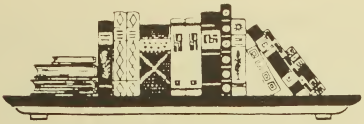
✓ to plant hybrid amaryllis bulbs out in a sunny or semi-shaded area with the tip of the nose just showing.

✓ to be drastic and cut chrysanthemums back to the ground.

✓ to plant bare-root stock of roses and trees (both fruit and shade).

✓ to spray "all" deciduous trees and shrubs with a combination insecticide and fungicide, such as oil and lime-sulphur or copperas. Follow directions as given. Continue bait for slugs and snails.

✓ to prune flowering trees and shrubs. They can be shaped and the flowers can be used in arrangements.



leafin' thru

All books reviewed are in the library of San Diego Floral Garden Center.

HYBRIDS AND HYBRIDIZERS' RHODODENDRONS AND AZALEAS FOR EASTERN NORTH AMERICA

Edited by *Philip A. Livingston* and *Franklin H. West*, Harrowood Books, Newtown Square, Pa., 1978, 256 pages, $25.00

Occasionally a book comes along that appears to speak the last word on its subject. Such is this one, for as David G. Leach, President of the American Horticultural Society, writes: "This book constitutes a unique record of hybridizing rhododendrons in the eastern United States. Its like is not to be found on this or any other genus, at any other time, in any other place, in the history of horticulture."

Livingston, a retired publisher of books on natural history, has seen to it that this one sumptuously proclaims its importance. Large in format, it contains 108 color plates of rhododendrons and azaleas, principally those bred by the five major personalities of the text. In addition, some 1,400 varieties are mentioned or described and recommendations for planting according to weather zones are listed. With all this grandeur, perhaps the most appealing pages in the book are those devoted to letters from the major hybridizers, in which they tell of their problems, methods, and delightfully modest pride in their achievements.

—Reviewed by Russell P. MacFall

THE CARNIVOROUS PLANTS

Francis Ernest Lloyd, Dover Publications, 180 Varick St., New York, NY 10014, 1976, 352 pages, paperback,

His investigation of the mechanism of traps by which plants capture insects led Professor Lloyd into a detailed and quite technical examination of the whole subject. Lloyd, emeritus professor at McGill University, Montreal, illustrated his work with 38 plates providing details of these mechanisms. The book, first published in 1942, is as curious as it is scholarly.

—Reviewed by Russell P. MacFall

WHY DOES YOUR GARDEN GROW

William R. Van Dersal, Quadrangles, New York Times Book Co., Three Park Ave., New York, NY 10016, (Drawings by Jeanne M. Cahill), 211 pages, $8.95

We all know that one does not have to know botany and horticulture as academic subjects to be a good gardener, but Mr. Van Dersal is assuming that many would like to know many of the terms and meanings in order to understand about plants and what makes them grow. He worked for the Soil Conservation Service of the U.S. Department of Agriculture and is now Dean of the Management College, National Graduate University, Washington, D.C. In layman's language, he explains the anatomy of plants, how they absorb moisture and food, and how plants are classified. He lists common botanical terms and explains them. He lists catalogs and handbooks that are helpful. After studying this book, one will feel less like an outsider when among trained people.

—Reviewed by Rosalie Garcia

WILD FLOWERS OF THE PACIFIC COAST

Leslie L. Haskin, Dover Publications, 180 Varick St., New York, NY 10014, 1977, 407 pages, paperback, $5.00

This standard work, first published in 1949, adequately describes 332 flowers and shrubs in popular fashion, arranging them by their botanical families. Its 182 full page photographs and excellent index of both botanical and common names are helpful features. The author's association with Oregon is one limiting factor in the book's usefulness for southern Californians.

—Reviewed by Russell P. MacFall

ORCHIDS FOR THE OUTDOOR GARDEN

A. W. Darnell, Dover Publications, 180 Varick St., New York, NY 10014, 1976, 467 pages, paperback, (no price listed)

This work was first published in 1930 to encourage popular growing of orchids. Its description of 977 species was designed to include those suitable for the climate of the British Isles. But Gordon W. Dillon, executive secretary of the American Orchid Society, in his introduction finds "many of the species ....potentially suitable for outdoor growing in some parts of the United States." The book is illustrated with 22 full page drawings.

–Reviewed by Russell P. MacFall

HOW TO GROW ANNUALS

Ann Roe Robbins, Dover Publications, 180 Varick St., New York, NY 10014, Revised edition, 297 pages, $3.50

Ann Robbins, well known as a writer on the growing of flowers and vegetables, does a thorough job. While she gardens in the East she is familiar with Western conditions and grows the same annuals we grow. In her lists she allows for frost and other climatic differences. She also reminds us in southern California that certain plants which are annuals in cold climates may be perennial for us. The author encourages the use of annuals to add color and variety to a garden and urges gardeners to plant seed in order to have the new and unusual.

–Reviewed by Rosalie Garcia

WATCH IT GROWN, WATCH IT CHANGE

Joan Elma Rahn, Atheneum Publishers, 122 East 42nd St., New York, NY 10017, 1978, 88 pages, $6.95

Many of nature's wonders are so familiar to us that we fail to notice and understand them, except casually. The miracle of budding and flowering merits the closer attention that we can get from this book. It follows the opening of a lilac bud, the budding and formation of an apple, the budding that creates the tubers of a sunchoke, and the germination of squash and pea seeds through their whole season by means of detailed drawings of each step in the process. A Ph.D. in botany from Columbia University, the author has written a number of books about plants for children. This one is equally worthy of the attention of adults.

–Reviewed by Russell P. MacFall

CHAUNCY JERABEK
1890–1978

It was 1912, in the springtime. On recommendation from nurserywoman Kate Sessions, newspaperman E. W. Scripps hired 22 year old Chauncy Jerabek to grow eucalyptus seedlings and plant them all over the hills and valleys surrounding the Scripps Miramar Ranch, located to the east of what now is the Miramar Naval Air Station. Chauncy did his job well; thousands of those trees still stand; many of them are in a section of the old ranch which now is property of the City of San Diego. Very fittingly, the official name for that very special section, well proclaimed by a large rustic wooden sign beside the entry, is 'Jerabek Park.'

It was 1918. Summertime. On recommendations from Kate Sessions and from Edward Scripps, the City of San Diego hired Chauncy Jerabek, put him in charge of the city's park plantings, and provided a residence for him in Balboa Park. For the next 38 years, Jerabek literally lived in Balboa Park. During all those years, he was planting tree seeds, training the seedlings, and planting them out in the park. In addition, he actively participated in the affairs of the *San Diego Floral Association*–on behalf of trees. During those years, in the pages of *California Garden* magazine there appeared many articles by Jerabek–about trees. He became very well known–as 'the tree man.'

It was 1956. Autumn. Chauncy Jerabek retired. He no longer could live in Balboa Park, but he wanted to remain close to it, so he bought a house closely adjacent to the park, from which he could take daily walks into the park which he loved, and which he had helped so much to beautify.

It was 1978. December. The walks terminated. At age 88, Chauncy Jerabek, 'the tree man,' died. He is gone, but the results of his lifetime of work live on, and he will not soon be forgotten. In a sense, the thousands and thousands of living trees in Jerabek Park stand as a living memorial to him, just as if they were his children. He planted them.

by Bill Gunther

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